

C. Dukes Scott Executive Director

# STATE OF SOUTH CAROLINA OFFICE OF REGULATORY STAFF

1401 Main Street Suite 850 Columbia, SC 29201

December 29, 2016

Mr. Kevin Marsh Chairman and Chief Executive Officer SCANA Corporation 220 Operation Way Mail Code: D302 Cayce, SC 29033-3701

Re:

SCE&G Petition for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina - Docket No. 2016-223-E.

Dear Mr. Marsh,

I am writing to follow up on the production by SCE&G to ORS of the revised fully resource-loaded integrated project schedule ("Revised Project Schedule") and related information that is the result of the comprehensive review conducted earlier this year by Fluor after it was brought into the V.C. Summer project. ORS requested the production of this Revised Project Schedule early last spring and again during our review of SCE&G's application in Docket No. 2016-223-E. Although we were told initially that the Revised Project Schedule would be available to Westinghouse in the 3<sup>rd</sup> quarter of 2016<sup>1</sup>, it was not.

Our interest in seeing the Revised Project Schedule has been intensified by recent events. ORS has been closely following news in financial publications regarding Toshiba Corporation ("Toshiba"), the parent company of Westinghouse Electric Company, LLC ("Westinghouse") which holds the Engineering, Procurement and Construction contract ("EPC Contract") for V.C. Summer Units 2 & 3 ("the Units" or "the Summer Project"). ORS is deeply concerned regarding statements in Toshiba's December 27, 2016 press release that indicate it is facing massive losses relating to the nuclear operations of Westinghouse<sup>2</sup>.

ORS has had ongoing concerns regarding the project schedule since it was informed last spring that Fluor and Westinghouse were undertaking an effort to produce a revised fully resource-loaded Revised Project Schedule using Fluor's construction metrics. Now that Toshiba has announced significant

<sup>&</sup>lt;sup>1</sup> In response to Question 1-33 of ORS's AIR dated March 4, 2015 regarding the October 2015 Amendment to the EPC Contract, SCE&G indicated that the target schedule for the completion of Fluor's Assessment and recommendations for changes to the schedule was the 3<sup>rd</sup> quarter of 2016.

<sup>&</sup>lt;sup>2</sup> In particular, ORS is concerned regarding the statement that reads: "Currently, as the timing reaches the deadline (December 31, 2016) for the procedure, the possibility has been found that the goodwill will reach a level of several 100 billion yen or several billion US dollars, resulting in a negative impact on Toshiba's financial results, as a result of impairment of all or part of the goodwill."

charges to be written off against the Westinghouse nuclear operations, ORS's concerns about the status of the Summer Project are renewed and increased. These developments call into question the ability of Toshiba to stand behind the additional losses that may need to be incurred to complete the Units.

ORS has no direct authority over Westinghouse or Toshiba to compel the production of information relating to the Revised Project Schedule. However, ORS does have a relationship with SCE&G and has been promised by SCE&G that it will provide the Revised Project Schedule to ORS. The time has come for SCE&G to insist that Westinghouse produce the Revised Project Schedule, including Fluor's input, to SCE&G so that SCE&G can provide it to ORS. As reflected in paragraph 10 of the settlement agreement in Docket 2016-223-E, the Revised Project Schedule is critical to the preparation by SCE&G of revised milestones that are intended to guide the completion of the Units and to provide ORS a way of monitoring the progress of the project. It is imperative that ORS be provided with the Revised Project Schedule so that we can do our job in monitoring the project.

ORS believes that the only major project activity that could have resulted in Toshiba's announcement is Westinghouse's analysis of Fluor's input to the Revised Project Schedule. We are aware that Fluor's input has already been developed and reviewed by Westinghouse on-site management and we have been told that the Revised Project Schedule is currently under review by Westinghouse corporate management. During our December meetings with project personnel, ORS was informed that the Revised Project Schedule would not be available until at least late January or February 2017. In view of recent developments, this delay is unacceptable. Both SCE&G and ORS deserve to understand the schedule and budget risks identified by Fluor's review and the potential impacts these may have on the project. It is difficult for ORS to do our job, and for SCE&G to do its due diligence as an Owner, without timely access to this critical information regarding budget and schedule risks. We can no longer wait to learn the potential impacts of this Revised Project Schedule, and we need to be privy to the information developed by Fluor without the refinements and proposed mitigations that may result from Westinghouse corporate review.

Therefore, we ask that SCE&G request from Westinghouse the input provided by Fluor regarding the Revised Project Schedule immediately, including input regarding unit rates and labor man hours, and initiate all necessary actions to ensure that ORS is provided with this input by January 10, 2017. As soon as the entire Revised Project Schedule, including Westinghouse's input, is available, ORS requests that it be provided as well. This request is made pursuant to S.C. Code Ann. § 58-27-40, which requires each electrical utility to obey and comply with all requirements of every direction prescribed by the ORS in relation to any matter relating to or affecting the business of the electrical utility.

Sincerely,

C. Dukes Scott
Executive Director

Kevin B. Marsh Chairman, President & CEO



January 18, 2017

Mr. Dukes Scott Executive Director Office of Regulatory Staff 1401 Main Street, Suite 850 Columbia, SC 29201

Dear Dukes,

Thanks for your letter dated December 29, 2016 regarding the recent announcement by Toshiba and Westinghouse of pending write-downs associated with the Summer and Vogtle AP1000 nuclear projects. I share your concerns regarding the impact of these write-downs and the delivery of the revised fully integrated construction schedule (the "revised schedule"). As we discussed, our SCANA team along with representatives of Santee Cooper met with Westinghouse and Toshiba in an effort to learn more about this situation and inquire about the delivery of the revised schedule we were expecting by the end of 2016. I also share your high level of interest in receiving the revised schedule as soon as possible.

I provided Westinghouse and Toshiba a copy of your letter to emphasize the importance of having access to the schedule as part of our commitment to keeping both the Office of Regulatory Staff and the Public Service Commission of SC updated on the status of the new nuclear project. Westinghouse and Toshiba have informed me that the revised schedule is a part of the financial review and evaluation of the pending write-downs associated with the AP1000 projects, and that they expect the revised schedule to be available at the time Toshiba releases its financial results in mid-February.

We continue to communicate with Westinghouse and Toshiba in order to monitor this situation as closely as possible and will update you accordingly.

Sincerely,

Kevin B. Marsh

KBM/pcr

100 SCANA Parkway - Cayce, SC - P (803) 217-8097

Mailing Address 220 Operation Way - MC D302 - Cayce, SC - 29033-3701

ORS SURREBUTTAL EXHIBIT GCJ-12 Page 1 of 135

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240,014 295,759

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535,773

EAC Due to Delay and Inefficiencies - Expected Invoice

Amount

EAC Due to Inefficiencies

EAC Due to Delay

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447,981

1,899

71,899

18,816 20,350

18,816 646,838

20,350 71,899 535,773

Site Layout CO (Included in Above but Reported Separately)

Cyber Security CO (Included in Above but Reported

Separately)

EAC Due to Delay and Inefficiencies - Expected Invoice

**EAC Entitled** 

Amount

June 2019 & June 2020

June 2019 & June 2020

Dec 2018 & Dec 2019

FNM/Direct)

(Based on 1.55 PF, .97 Indirect/Direct, .60

Referred to as \$660 due to

NND EAC Build-up

8/14 Consortium EAC-As

8/14 Consortium EAC-As

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Reconciliation of Consortium Provided EAC

55% in \$07 \$'s (\$000)

(25,972)

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18,816

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EAC Due to Delay and Inefficiencies-Cash out the Door

Cyber Security CO (T&M) Site Layout CO (T&M)

10% Withholding of Inefficiencies One option available to Owner:

10% Withholding of Delay

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12,100 3,363

12,100 3,363

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Fotal EPC Filing Request (Target, T&M, Firm)

CO - Shield Buildings Expediting (Firm) Total EAC Portion of the EPC Filing

CO - Misc (Target, T&M, Firm)

Currently, Owner is only withholding NonLabor costs directly attributable to the module delay is readily identifiable. See "Potential Steps to Influence 401 NOT Control of Target Price by the Contractor" document for project team recommendation.

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2/24/2014	5:00 pm	Jent to

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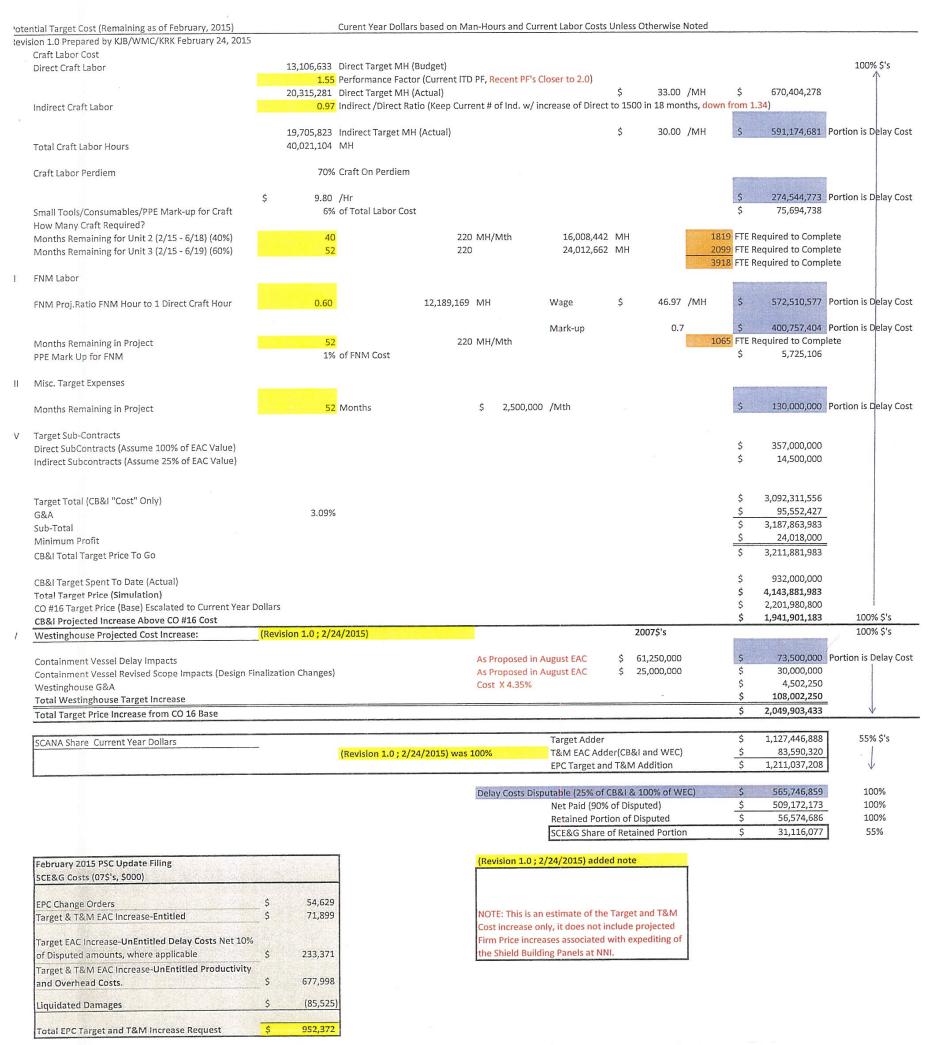
Reconciliation of Consortium Provided EAC
55% in \$07 \$'s (\$000)
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Currently, Owner is only withholding NonLabor costs directly attributable to the module delay is readily identifiable. See "Potential Steps to Influence Control of Target Price by the Contractor" document for project team recommendation.

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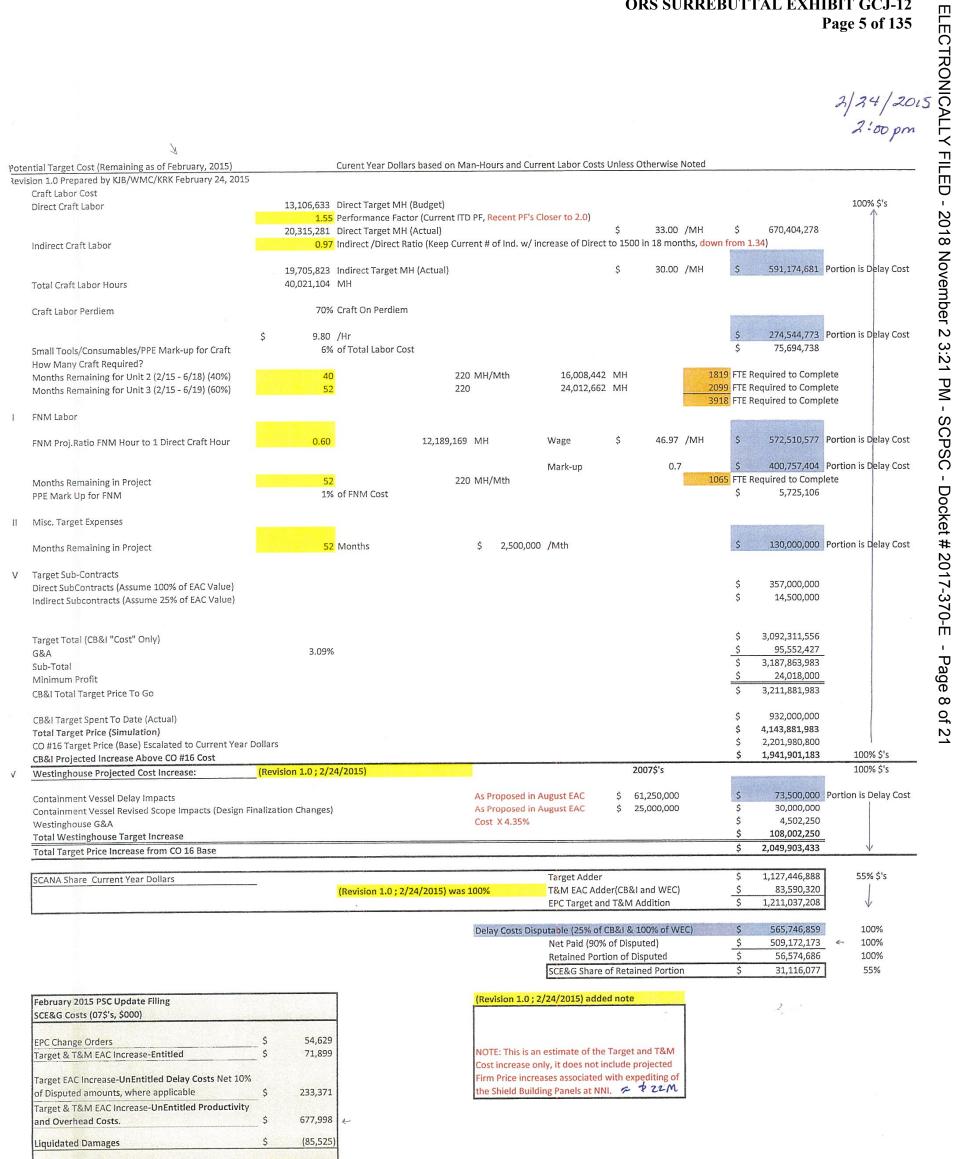




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1	Control   Cont	Modules	3,441			823	781					2,735			7,780	4,339	
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Total EPC Target and T&M Increase Request

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		7			as Lonhart	Ede Contract target	- Marie 197		
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Topic / Description	6/6/14 Input	Contract Basis	(WITH CAP)	(NO CAP)	12.56% Over Estimate	Owner Terms w/ EPC Target Concept	Manhours	(NO CAP)	W/ ZX Ivlannours
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@ 50hr/wk)	24.25	5 2,03					\$ 1.45	\$ 22.66	
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PE (\$/MH)	1.78	\$ 2.13	325		\$ 4.50		ian		
	7.00		\$ 9.38						3.38
	13.95%	13.95%	18.75%				13.95%		
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Manhours (In-direct)	375,000	375,000	160,000		-		000,000		
Indirect Rate /MH	55.80			\$ 118.51	\$ 110.34	\$ 117.38		15.31 ¢	25.222
	20,925,000	\$ 24,288,750					48,577,500	•	
Total Cost Estimate (CB&I Power Cost) \$	48,781,311	\$ 56,619,005		\$ 55,402,729	\$ 44,574,326	\$ 45,399,777	\$ 113,238,010	\$ 107,805,459	
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				weld SB panels. Does not	Limited Scope, Rig, fit, and weld SB			weld SB panels. Does not	Imited Scone Ris fit and weld SB canels. Does not
				include air inlets, tension ring,	panels. Does not include air inlets,	Limited Scope, Rig, fit, and weld SB panels. Does not	SB Wall Panels Only. Up to	roof, or PCS tank OR CBIP In-	include air inlets, tension ring, roof, or PCS tank OR
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CO 16 Settlement for Reference		09/,858,75 \$	N/A	14/A		12 EGS Over Sejmated Cort	CN	No Cap	12.56% Over Estimated Cost
Calculation of Established Target Price	No Cap	No Cap	12.56% over Target	NO Cap	12.56% Over Estimated Cost	\$41.272.524 + Contingency \$5,183,829 + Profit			\$43,324,142 + Contingency \$5,441,512 + Profit
			cap at \$90,828,335. Below			\$4,645,635 = CB&J Services - SB Established Target			\$4,876,565 = CB&I Services - SB Established Target
			Target, CBIS gets 60% of		Target of \$46,790,073 w/ cap at	Price (ETP) of \$51,101,989. Below ETP, CBIS gets			Price (ELP) of 553,542,219, Below ELP, LDIS gets 80% of cavings, above the ETP. CB&I Services goes to
Incentive			savings, between Target		\$52,666,906. Below target, CBIS	80% of savings, above the ETP, Chai Services goes to Minimum Profit (30% of Base Target Price Profit			Minimum Profit (30% of Base Target Price Profit
	Tarpet w/ 80% of savines or	Target w/ 80% of savings or	and Cap 40% reimbursement to CBIS,	No Incentives to complete on	Target and cap 40% reimbursement	Dollars), compensated per the process as defined in	Target w/ 80% of savings or	No Incentives to complete on	Dollars), compensated per the process as defined in
22	min. profit overage	min, profit overage	above Cap -\$0	budget.	to CBIS, above cap - \$0.	Ibit H of the EPC Contract.	min, profit overage	get	Exhibit H of the EPC Contract.
****Sub-contract Cost (Total \$'s)	N/A	N/A		\$ 55,402,729	\$ 44,574,326	\$ 49,961,546.14	NA	\$ 107,805,459	
Additional Cost for SB Erection						002 850	Ċ	501 900	501.900
Remaining CBIP In-direct MH	0	0	N/A	2	73				
CBIP In-direct cost /MH				5 64.77	7.750	5 15 434 691		\$ 32.508.063	\$ 32,508,063
Total CBIP In House Cost							\$ 113.238.010		
Total SB Erection Cost to CBIP		\$ 56,619,005				2 00%	, cr	(1	3.09%
Consortium G&A (CB&I Power)	3.09%	3.09%	1	3.09%	3.03%	4 567%	4.562%	4.562%	4.562%
6 6	4.5	4.	WEC Kate 7.75%		4.202.72 \$ 64 685 499	\$ 70.492.544	\$ 122,062,609	\$ 151,248,107	\$ 129,026,829
Minimum Cost to Owner (2 Units, Total \$'s)	52,582,822	5 61,031,305	N/A	067,765,07					652,000
With Additional CBIS Direct Craft MH		29	w/ 1.4 Perf. Factor	37	1/6,191		\$ 43.87		
CBIS Direct Craft MH Cost / MH		43.87	CBIP Craft MH Cost	\$ 31.093.572	5.598.535	23,709,542		\$ 62,187,023	\$ 47,419,084
Additional Direct Craft Cost		1	Auditional Cost				11.7		100
Expected Cost to Owner w/ CBIP Mark-ups at CBIP		\$ 5 500 PT 501	With SGA and Full	\$ 109 874 375	5 70.720.327	\$ 91,691,275	\$ 122,062,509	\$ 218,281,343	\$ 180,141,266
Est. Craft MH			LIGHT			No Cap. But Minimum			
		No.	(Min Drofit Applies)	No Can on Cost	Cost @ CBIS Cap	Applied	No Cap on Cost	No Cap on Cost	No Cap, But Minimum Profit
		No Cap on Cost	(iwill: riolit Applies)		Minimum Profit Provisions for CB	Ü	tions Applied In This Evaluation		
Deviation From Approved Budget of \$57,959,760		\$ 17,011,441		\$ 51,914,615	\$ 12,760,567	\$ 33,731,515	\$ 64,102,849	\$ 160,321,583	\$ 122,181,506

\*\* Small Tools in EPC based on 6% Craft Labor Mark Up, PPE is 1% Mark Up

\*\*\* All Home Office MH should be Firm Price Scope, \$3,000,000 excluded from Owner's Options

\*\*\*\* Subcontract Total Cost based on projected manhours indicated (411,000 Craft + 111,400 FNM)

\*\*\*\*\*Consortium Profit of 4.562 % is based on not exceeding the ETP

	-	Period Earned Ho	1	-	
e Labor	н	Period Actual Hours	2,523	4,714	763
三	σ ·	노	1.02	98.0	108
Direc	F (C/D)	To Date PF			
uctivity (	E (D/B)	% Complete	78.5%	72.9%	52.8%
on Prod	۵	ITD Earned Hours	527,351	218,037	78.424
nstruction	O	ITD Actual Hours	540,457	213,941	84.531
Farget Construction Productivity (Direct Hire Labor)	ω	Target Work Hours	671,390	298,986	148 475
-		afts			

Reporting Period: January 2015

V.C. Summer Units 2 & 3 EPC/132177 & 132178

Ø

J (H/I)

Period PF	1.71	2.59	5.37	00.00	4.22	2.29	1.36	4.30	00.00	2.83	00.00	0.00	4.27	3.42	3.52	00.00	1.19	00.00	00.00	1.47	2.74
Period Earned Hours	1,472	1,819	142	0	279	28,006	206	3,668	0	558	0	0	958	1,149	1,402	0	751	0	0	105	41,216
Period Actual Hours	2,523	4,714	763	0	1,178	64,232	1,236	15,765	54	1,577	0	0	4,086	3,930	4,939	6,663	894	0	284	154	112,992
To Date PF	1.02	0.98	1.08	0.99	1.67	1.88	2.01	1.69	3.21	1.74	2.15	09.0	1.75	1.74	1.59	5.67	4.99	00.00	00.00	1.27	1.55
% Complete	78.5%	72.9%	52.8%	56.4%	44.2%	24.8%	40.1%	12.9%	0.1%	0.7%	0.1%	16.2%	3.1%	2.9%	22.1%	3.9%	19.4%	%0.0	%0.0	11.3%	15.2%
ITD Earned Hours	527,351	218,037	78,424	1,969	61,183	1,009,383	14,996	130,088	49	25,386	454	885	41,339	69,206	151,147	7,799	2,570	0	0	1,443	2,341,727
ITD Actual Hours	540,457	213,941	84,531	1,958	102,395	1,893,113	30,108	220,471	215	44,149	226	534	72,505	120,367	240,151	44,236	12,827	0	287	1,832	3,625,054
Target Work Hours	671,390	298,986	148,475	3,493	138,564	4,075,545	37,390	1,009,301	116,107	3,874,879	459,137	5,457	1,319,443	2,364,291	682,743	200,320	13,263	14,254	2,560	12,762	15,448,360
Direct Construction Crafts	Site Prep	Site Improvements	U/G Electric	U/G Valves	U/G Pipe	Concrete	Special Concrete and Coatings	Structural Steel	Buildings	A/G Electric	Instrumentation	A/G Valves	A/G Pipe	Pipe Welding/Hydro/Supports	Major Equipment	AP1000 Structural Modules	AP1000 Mechanical Equipment	AP1000 Piping Modules- Contai	AP1000 Piping Modules - Auxilia	Miscellaneous	Total

<sup>\*</sup> Miscellaneous includes: Demolition, Liner, Insulation, Ductwork, Startup & Commissioning

Ken's Analysis:			Date	Total Craft	Craft on Site	FNM Total	FNM on Site
To Go Manhours	13,106,633	84.84%	6-Jan	1948	1721	1025	949
Direct FTE Expended	565		12-Jan	1873	1685	1037	858
Direct FTE Earned	206		19-Jan	1890	1713	1046	688
Average Craft Manpower on Site	1,715		26-Jan	1909	1741	1052	880
Indirect Craft M-H (from Invoice)	150,000		Average	1905	1715	1040	818.25
Indirect FTE	750					39,4	

Months to Complete @ Jan Rate

318 Months 26.5 YEARS

3 5,338,101.40 taged 150,000 indured

# ELECTRONICALLY FILED - 2018 November 2 3:21 PM - SCPSC - Docket # 2017-370-E - Page 11 of 21

Earnachidene system Citie Ou

CBI Update

CBI Update (escalated)

Shield Building Sub-Contract Analysis

2014 \$'s

Lyash, Deplevos

4/12/3014

norron

(F) The \$32/HR rate is conservative. CBIP is currently running <\$29.00 for indirect craft labor.

SG CBI Power has agreed to remove profit for this scope of work.

PERFORM GOOD AD TELL ENGINEERING (1604 NAMEDIL CLEVITED OF TOTAL)

BUILDELE Consumables and PPE to be invoiced to client separately but still on Target Price contract. \$5.32 rate to . remain fixed thru 2017. (PATSUMERFOLE) & PPC DUCLES & COST PLEA BASIO (E) There will be limited CB&I Power Indirect Carft Labor support for CB&I Services Scope. Tasks such as Orientation, Training, Safety Meetings, Clean-up, Fire / Hole Watch, etc. are included in the CB&I Services (A) Overhead for CBIS on WEC Contract is \$7.50 / MH over 7,500 MH for the T&M changes. Overhead for CBIS on WEC Contract is \$7.50 / MH for all base scope hours. (D) For the Shield Wall erection work, consumables, including PPE, will be invoiced separately and subject (B) Small Tools reduced from \$9.00/HR to \$5.32/HR. Consumables and PPE are not included in \$5.32/HR. (C) CV contract includes escalation clause. Current rate based on escalation clause is \$5.09/HR to markup per the terms of the subcontract. For CBI Power, the EPC agreement addresses the base hours. Current SB Proposal billed T&M by CBIS \$ 5.32 (note B) \$9.38 \$1,443,000 \$31.43 16.00% \$7.50 or T&M work, consumables and PPE are WEC / CB&I Svcs. CV \$ 5.09 (note C) \$9.38 \$7.50 (note A) contract included in base Contract included in base eimbursible 17.50% \$31.43 \$22.66 Overhead \$/MH CPSI SERVICES Subcontract Markup (%) Wage (\$/Hr for Welder @ 50hr/wk) Benefit Markup (Avg. \$) Consumables & PPE (note D) Small Tools & PPE (\$/WH) PVE (erection drawings) 4/m/4 Subsistence (\$/Hr) Payroll Taxes (%)

56.6

\$767,000 790,000

contract included in base contract

CCT (construction technology)

CWT (welding technology)

100

- Selected pre-boung affiliate
- CAN'E Cap ble so many roded water
- CAN'E cap ble so many roded water - Long lead wold equeprious - some selectule sensitivity 13 taining, forewatch, tool doom ahoubact per lyath

111,400 ... tand weld timined Scope, Rig, fit, and weld SS panels. Bose nut include all infest, Lention ting, took or PCS

V/A, Containment Vessel for Comparison

411,000

316,000

FNM

Manhours (Craft) Manhours (Non-manual)

149 > point when repes

23,000 COST POWER SUPPORT

Additional Cost for SB Erection
Remaining Self Performed MH, (note E).
Avg GBIP Cost/MH (note F)

Sub-contract Cost (Total \$'s)

ncentive

\$724,500 \$56,724,500 3.09%

WEC Rate 7.75%

Consortium Profit (CB&I Power) (note G) Cost to Owner ( 2 Units, Total \$'s)

Consortium G&A (CB&I Power)

Total CBIP Cost Total SB Erection Cost

incentives to complete on

Terret of \$84,128,335 w/ cap at \$90,228,335. below Terret, GBIS per 60% of savings, between Terret and Cap 40%.
Terret and Cap 40%.
Cap -50

CO 16 Settlement ( 2007 \$'s)

Scope (?)

56,000,000

YEK KER: 1 tHAR to be Filled wold who experentian by 3/35/2014. (letter out by 7/18/2014)

CONFIDENTIAL

2/25/2015

ORS SURREBUTTAL EXHIBIT GCJ-12 Page 9 of 135

	\$ 1,004,122	\$ 1,055,891		701 11	65,581	15,672	13,410	107,120	/5E,/ 505 C	7507	3.285 3.285	4.075	3,148	3,802	(34,598)	60,665	268,504		752 203	252,703	3,00°C	12,033 2,115	7.00 T.00	(±78 c)	10.101	•		(33,357)	38.154	289,062	TA 613 1 4	1019,42), 4	\$ 1,466,187	557,566 462,065	245,096
2015 Proposed NND PSC Update Filing - Owner's Cost February 24, 2015 (100% \$'s) (\$000)	Approved PSC Budget - 2007 \$'s	Approved PSC Budget - Current Year \$'s	Variance Summary NonLabor	eguesisul - yelefi ((())	COD Deby, IST	COD Deloy = (5)	COD Polar. Other		racilities Facilities	NRT	CC687 Added Contractors	APOG	Maint Equip	PRA	12-14 Underspend	Misc	Total NonLabor	Labor	COD Delay	Merit	Increased Headrount - Staffing Study	Increased Headcount - Training	Increased Headcount - Coher Ser Others	SPC SPC	Bonus	Training Labor Increases	Ops Labor Increases	12-14 Underspend	Misc	Total Labor	Proposed PSC Budget - Current Year S's		Proposed PSC Budget - 2007 \$'s	Increase 100%	Increase 55%

# ORS SURREBUTTAL EXHIBIT GCJ-12 Page 10 of 135

### WICKER, SHERI L

From: BROWNE, KENNETH JEROME

Sent: Wednesday, January 14, 2015 11:40 AM

To: ARCHIE, JEFFREY B

Cc: JONES, RONALD A; SMITH, ABNEY A JR; WALKER, CARLETTE L; CHERRY, WILLIAM;

KOCHEMS, KEVIN R; WICKER, SHERI L

Subject: Proposal for Target Price Incentives for Labor and Shield Building Subcontract Attachments: Potential Steps to Influence Control of Target Price by the Contractor.docx

Jeff, I prepared the attached summary based on our discussion yesterday. I have included some background along with the concepts for Target Price invoice retention for the Craft and FNM labor and Shield Building subcontract. Please review this and let me know if this meets your expectations for what we would discuss tomorrow with the Consortium.

Thanks, Ken

Ken Browne, P.E. Senior Engineer Business and Financial Services New Nuclear Deployment, SCE&G (803)941-9817

## ORS SURREBUTTAL EXHIBIT GCJ-12 Page 11 of 135

### Potential Steps to Influence Control of Target Price by the Contractor

### Target Price Labor

### Background:

- Labor (Direct Craft/Indirect Craft/Field Non-manual) makes up over 60% of Target Cost
- Greatest risk exposure for Target Price increase
- EAC provided by Consortium in August 2014, based on assumptions/goals by the Consortium for headcount and Direct Craft performance (PF)
- At the time of the presentation, it was clear to the Owner that the Consortium was making a
  commitment to these goals and the Consortium indicated that steps were taken with the
  expectation of meeting goals within six (6) months
- Project staffing levels and Direct Craft performance, to date, have not met expectations
- Meeting the proposed goals would lead to an actual Target Price corresponding to the EAC
- Continued failure to meet expectations will result in gross over-runs of the EAC Target Price

Proposed Incentives to Influence Consortium to Meet Committed Performance:

NOTE: The Target Labor incentives must be considered as a combined package and can't be partially implemented due to the opportunity to improve one category at the expense of another.

- Retention by Owner of a portion of billed cost, to be released upon project completion within the bounds of a mutually agreed upon Project Schedule and Target Price Budget
- For Direct Craft Labor, based on PF of 1.15 as indicated in the August 29, 2014 EAC presentation...
  - Establish a graduated series of intermediate PF goals, leading to Target PF of 1.15 within
     12 months
  - Direct Craft Labor Payment = Direct Craft Labor Invoice X (PF Goal/Actual PF)
- For Indirect Craft Labor, based on Indirect Craft Labor / Direct Craft Labor ratio of .39 as indicated in the August 29, 2014 EAC presentation...
  - o Establish a graduated series of intermediate Indirect / Direct goals, leading to Target ratio of .39 within 12 months
  - o Indirect Craft labor Payment = Indirect Craft Invoice X (goal ratio / actual ratio)
- For FNM Labor, based on a FNM Labor / Direct Craft Labor ratio of .53 as indicated in the August 29, 2014 EAC presentation...
  - Establish a graduated series of intermediate FNM/Direct Craft Labor goals, leading to Target ratio of .53 within 12 months
  - o FNM Labor Payment = FNM Labor Invoice X (goal ratio / actual ratio)
- 2. Shield Building Subcontract Performance:

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вас	kgro	und:

### ORS SURREBUTTAL EXHIBIT GCJ-12 Page 12 of 135

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- Consortium awarded subcontract to an affiliated party without substantial justification for the sole source award and assurance to the Owner that the subcontract reflects terms no less favorable than would be available from a person who is not an affiliate
- Subcontract issued on a T&M price basis with profit level well beyond the EPC profit and provides a method for Consortium to subvert Target Price incentives contained within the EPC Agreement

Proposed Incentives to Influence Consortium to Meet Target Price Expectations and Partially Restore Target Price Incentives:

- Retention by Owner of a portion of billed cost, to be released upon project completion within the bounds of a mutually agreed upon Project Schedule and Target Price Budget
- Owner agrees to reimburse Consortium in full for actual subcontract Target Price invoices up
  to the base subcontract scope of 411,000 Craft Labor hours plus 46,100 Field Non Labor
  Hours and 65,300 Onsite Project Management hours as indicated in the subcontract data
  provided for justification of the award
- For all Target Price invoices above the base subcontract award hours, the Owner will retain Subcontractor markups and profit, reimbursing only for actual Subcontractor cost, to be released as described above

# 2015 Nuclear Update Filing BRIEFING PAPER

(all amounts 55%/2007\$)

### 1. Key Dates:

a.	Filing:	February 27, 2015
b.	Likely Date Testimony Due	Mid-May to Early-June
c.	Likely Hearing Date	Mid-to Late-July
d.	Order Due:	August 27, 2018

2.	Summary of Costs:	w/o 90% EPC Delay	w 90% EPC Delay
	Owners Costs	\$245M	\$245M
	Change Orders	\$55	\$55
	EAC Not Disputed	\$72	\$72
	90% EPC Delay		\$233
	Subtotal	\$369M	\$605IVI

- 3. Update Request: The total request represents \$605 million in 2007 dollars.
- The Update to EPC Costs: EPC costs represent approximately 60% of the total request or \$360 million.
- 5. The Update to Owner's Cost: Owner's cost increases represent approximately 40% of the total request or \$245 million
- 6. The Components of EPC Cost Request:
  - a. The 90% EPC Delay Cost represents approximately 38% of the total request or \$233 million.
  - b. EAC Not Disputed, i.e., SCE&G's assessment of the entitlement for additional labor costs identified through the design finalization process, represents 15% of the requested increase or approximately \$72 million.
  - Other change orders represent 9% of the increase, or \$55 million.
    - i. Site Security Layout represents 4%, or \$20 million.
    - ii. Cyber-Security Phase II represent 3%, or \$19 million.
    - iii. Shield Build Module Schedule Mitigation represents 2%, or \$12 million.
    - iv. The remaining change orders represent 1%, or \$4 million.
- 7. The Components of Owner's Cost Request:
  - a. Delay: Owner's cost increases attributable to the delay in the Commercial Operation Date (COD) of the project represent approximately 35% of the request or \$210 million. These are the costs of supporting the project for an additional 27 months for Unit 2 and 25 months for Unit 3.
  - NND Personnel: Personnel costs associated with 64 additional FTEs for the New Nuclear Development project represent approximately 1% of request or approximately \$7.5 million.
  - c. Other Categories: Other categories of Owner's costs represent approximately 5% of the request or approximately \$29 million. They include increases in software and information technology costs, AP 1000 owners group expenses, facilities costs, and NRC inspection fees.
- Milestone Schedule Request: SCE&G will request the Commission to update the current milestone
  schedule to reflect the new COD dates and revised construction schedule which place a number of
  milestones are beyond their contingency-adjusted due dates.

2/25/2015 Source Belton/Byron

ELECTRONICALLY FILED - 2018 November 2 3:21 PM - SCPSC - Docket # 2017-370-E - Page 17 of 21

ш	EAC Minimum Entitlement (Inclusion in 2015 Rebaseline EPC Cost Docket) (100%, 2007 \$'s, \$000) (Based on Dec. 2018 & Dec. 2019 COD's)  Target  CB&1  CB&1	itlemen 107 \$'s, \$(	num Entitlement (Inclusion in 2018 Rebaseline EPC Co. (100%, 2007 \$'5, \$000) (Based on Dec. 2018 & Dec. 2019 COD's)  Target WFC CB81	2015 Re ec. 2018	sbaseline & Dec. 201	EPC Cost [ 9 COD's]	st Docket	M37			
	2000	7 883 122	123	WEC	231 501	ŭ)	ned	T&N			
	· v›		984 (0)	n 40		5 1,93	3,104,703		\$ 429,791		
	<b></b>	\$ 1,048,138	138	w	120,589	\$ 1,16	1,168,727	100	•	Incl G	incl G&A and Profit
		200	100	·s	120,589 \$		120,589		\$ 34,887		
Site Layout Change Increase (w/ SGA & CO Profit)	\$		12,742 (7)					,		17	
Owner EAC Team-Contractually UnEntitled Costs CB&I Schedule Delay-Modules									6		
CB&I Acceleration CB&I Schedule Delav-Rebar	\$ (166,494)							\$ (4,309)			
WEC Schedule Delay-Modules (CV)		SSECTION		ş	(61,250)	20025000	SECTION SALES	5 (11 FOOL @	0		
WEC CVAP & FOAK Home Office Hours									<b>.</b>		
CB&I Total Contractually Unentitled Cost WEC Total Contractually Unentitled Cost	•	100	(489,363) ①	7	(C) Orton	C	New Conference	PERSONAL DEMOCRACI	\$ (10,335) 2(3)		
Owner EAC Team-Prudency UnEntitled Costs				3	(007'10)	3			(11,600) 2(4)	NO G	No G&A or Profit
CB&I PF Decrease to 1.15 To-Go	(88,633)		¥					,			
inc)	\$ (164,187)							(849) (5)			
WEC EPC Management				45	(21,000)			· · · · · · · · · · · · · · · · · · ·			
WEC Licensing CB&I Total Prudency Unantitled Cost	v	(227 349)	(F) (1072	co.	•			(27,250)	( ) - ( ) - ( ) - ( )		
WEC Total Prudency Unentitled Cost				10	(21,000) (2)	0		A •S	\$ (27,250) 2.5		
	S	(816,712)	712) 2①					*	(11,184) 5(3)(5)		no G&A or Profit
	S		236)					•			
Lbox Profit Reduction Total Fully Loaded CB&! Reduction	v s	(880,358)	10)					w w	(12,056) (8)	Profit w/ G&A	Profit w/ G&A And Profit
WEC Total Reductions WEC 5GA Reduction WEC Froff Reduction WEC Froff Reduction				w w w	(82,250) <u>2(2)</u> (3,578) (6,652)	<u>@</u>			(38,850) (1,690) (3,142)	no G&A G&A Profit	no G&A or Profit G&A Profit
				^	(92,430)			S	52.74	w/ G&A	w/ G&A And Profit
fotal Fully Loaded Target Reduction in EAC	45	(880,358)	58)	s	(92,480) \$		(972,837)	**	(55,737) 2(8)		
Revised Target EAC Subtract CO Costs w/ G&A and Profit(SL)	\$ \$		64 42 (7)	so so	\$ 101,921	2,131,866	131,866	\$	374,054		0
New EAL Amount Subject to imminum From Profit in this amount	n vn	- 1	24	n 40	9,286 \$	2,119,124	96,110				
EPC Est. Target Price Inc. Profit EPC Current Profit	<b>\$</b>	1,834,984	84 60	s s	100,992 \$ 7,264 \$	1,935,976	87,324 87,324				
	es es	24,018 (56,042)	18	SS	2,179 \$ (5,085) \$	26	26,197				
	\$	1,946,722	22 (9)	s	124,017 \$	2,070,739	739	s,	374,054		
Tareat + T&M Entitled FAC Increase	s,	111,7	111,738 ∑® less ⑩	s	23,025 \$		134,763 (1)	44 4	71,306 (1)		
Removal of Change Orders for Filing Purposes		Target	T&M	Ţ	Target	T&M		•	200,003		
	In EAC \$	20,465	s, c	36							
		31,465	, n vs	36							
	G&A \$	50 6	vs t	<sub></sub>							
	Total \$	36,447	\$	42				S	\$ (36,488)		
	In EAC		89	65		2.	24181				
	G&A Profit		\$ 268	82 FF	vs v		1,052				
	Total		\$ 10,030	ll o	· ·	2	28,866	\$	\$ (38,896)		
								100% \$	100% \$ 130,684 5!	52% \$	71,876

Owner EAC Team Summary

ORS SURREBUTTAL EXHIBIT GCJ-12 Page 15 of 135

\$89,421,668.94

Total

# Owner's Total Dollars Returned and Outstanding as of December 31, 2014

	Acrued	\$7,216,978.63			\$31,073,653.03 Moved in future cash flows		\$41,583,215.77 Moved in future cash flows		\$3,519,775.20		\$4,922,239.93		\$1,105,806.38 Accrued	
\$1,405,811.35 \$28,710.55 \$1,434,521.90	\$133,192.23 \$3,153,309.68 \$970,817.72 \$1,525,137.10 \$5,782,456.73		\$16,632,714.12	\$14,440,938.91		\$17,945,150.55 \$23,638,065.22		\$1,375,310.67 \$2,144,464.53	STATES AND THE PROPERTY OF THE	\$2,676,447.92 \$2,245,792.01		\$1,105,806.38		
Westinghouse Target (includes G&A/Profit) CV Delay Charges from CBIS to WEC Firm Price Vendor Support	CB&I Stone & Webster Target (includes G&A/Profit) Storage - Blythewood Warehouse Lease (Module Delay) Storage - Tents (does not include labor, pad or electrical costs) (Module Delay) Garney Subcontractor (resolution in CO 17) Firm Price Charges - labor, subcontractor, vendor rework	Total Target Returns	Westinghouse Firm Price Milestones Simulator Milestones - milestones not completed	CB&I Stone & Webster Firm Price Milestones Replacement Milestones not approved by Owner	Total Firm Price Milestone Returns	Westinghouse Progress Payments CB&I Stone & Webster Progress Payments	Total Progress Payment Returns	Westinghouse Capped Escalation due to Module Delay CB&I Stone & Webster Capped Escalation due to Module Delay	Total Capped Escalation Returns due to Structural Module Delay	Westinghouse Returned Escalation for HW escalation calculation (CO 16) CB&I Stone & Webster Returned Escalation for HW escalation calculation (CO 16)	Total Escalation Returns for HW escalation calculation (resolution in CO 16)	CB&! Stone & Webster Returned T&M Startup Invoices (resolution in CO 17)	Total T&M Startup Returns (resolution in CO 17)	

# ORS SURREBUTTAL EXHIBIT GCJ-12 Page 16 of 135

Cost of Craft Labor Raises and Per Diem January 6, 2015
100% \$'s

Cost impact of \$4.50 raise given to craft and Paying Per Diem for Saturday and Sunday

Assumed All Direct Craft got pay increase and are receiving Per Diem Assumed NO Indirect Craft received a pay or Per Diem increase These two Assumptions probably offset each other

23,426,232 Total EAC Direct Craft Hours from (before management cuts)

3,405,355 Total Direct Craft Hours Spent Thru 11-23-14

20,020,877 Hours Remaining

\$ 90,093,947 Total Cost impact of \$4.50 Raise

400,418 Man Weeks Remaining assuming a 50 work week

- \$ 56,058,456 Cost of a \$70 day for an additional 2 days per week of Per Diem
- \$ 146,152,402 Total Cost of Per Diem Increase and Raises
- \$ 4,516,109 G/A Impact of Above
- \$ 150,668,511 Impact to Owner of Increases at 100%
- \$ 82,867,681 Impact to Owner of Increases at 55%

IN addition to EAC

ELECTRONICALLY FILED - 2018 November 2 3:21 PM - SCPSC - Docket # 2017-370-E - Page 20 of 21

	Shield Building Sub-Contract Analysis- Owner Proposal	
4	Provided May 20, 2014	

			Owner Terms w/ EPC Target Concept	10.00%	\$ 31.43	2		\$ 4.50	\$ 9.38	9.85%		411,000	111,400		Limited Scope, Rig. fit, and weld 58 panels. Does not include air inlets, tension ring, roof, or PCS tank.	N/A	12,56% over Estimated Project Costs	CBSI Services - SB Estimated Project Costs 54,024,13,811 + Contingency SS,117,118 + Frofit 54,585,550 o CBS Fervices - SB Established Target Price (ETP) of \$50,441,349000, Below ETP, CBS gets 80% of savings, above the ETP, CBSI Services goes to Minimum Profit (30% of Base Target Price Profit Dollary), compensately per the process as defined in Exhibit 1 of the EPC Contract.	\$ 50,444,349	(@ Cap)	279,118			\$ 63,189,813	3.09%	4.552%
2014 \$'s			Owner Terms w/ Cap	8.00%	31.43	\$ 22.66	\$ 2.50	\$ 4.50	9:38	%58.6	•	411,000	111,400	Limited Scope, Rig, fit, and weld SB	panels. Does not include air inlets, tension ring, roof, or PCS tank.	N/A	12,56% over Target	farget of \$44,000,692 w/ cap at \$45,271,179. Below target, Oils gets 60% of savings, between the partial and opposite and on public perinbursement to Gills, above eap - \$0.	\$ 49,527,179	(@ Cap)	279,118	\$ 46	\$ 12,745,464	\$ 62,272,643	3.09%	4.562%
		Current SB Proposal	(NO CAP)	16.00%	\$ 31.43	\$ 22.66 \$	\$ 7.50	\$ 00.6 \$	\$ 9.38 \$	9.85%	\$ 000'000'E \$	411,000	111,400		ring,		No Cap	77 54. 84. 84. 85. 17.	\$ 56,000,000		279,118	\$ . 46	\$ 12,745,464	\$ 68,745,464	3.09%	4.562%
	WEC / CB&I Svcs.	CV Contract	(WITH CAP)	17.50%	\$ 30.43	\$ 21.77		\$ 4.50	\$ 9.38	18.75%	- \$	316,000	160,000		N/A, Containment Vessel ir		12.56% over Target	Target of \$64,128,335 w/ cap at \$590,828,335. Below Pater, CHS gats GO% Graving, between Target and Cap 40% reimbursement to CHS, blove Cap-50.			N/A					WEC Rate 7.75%
		Self Performed	EPC Contract	N/A	\$ 31.90	\$ 1.60	٠,	\$ 2.34	\$ 7.00	13.95%	\$	801,518	Included Above	ruil scope of 36 shelf, Includes from receipt	inspection, thru welding and painting, FULL SHELL	\$ 43,469,820	No Cap	Target w/ 80% of savings or min profit oversee	N/A		0			\$ 43,469,820	3.09%	4.562%
	2007 \$'s	Self Performed	EPC Contract	N/A	\$ 31.90	\$ 1.60	•	\$ 2.34	\$ 7.00	13.95%	\$	801,518	۲.	Includes from receipt	inspection, thru welding and painting, FULL SHELL	\$ 36,600,000	No Cap	Target w/ 80% of savings or min, notific oversee	N/A		0			\$ 36,600,000	3.09%	4.562%
			Topic / Description	Subcontract Profit (%)	Wage (\$/Hr for Welder @ 50hr/wk)	Benefit Markup (Avg. \$)	*Overhead \$/MH	**Small Tools & PPE (\$/MH)	Subsistence (\$/Hr)	Payroll Taxes ( %)	***Home Office (Total \$'s)	Manhours (Craft)	Manhours (Non-manual)		(2)	CO 16 Settlement ( 2007 \$'s)	Calculation of Established Target Price	Incentive	****Sub-contract Cost (Total \$'s)	Additional Cost for SB Erection	Remaining Self Performed MH	Avg CBIP Cost/MH	Total CBIP Cost	Total SB Erection Cost	Consortium G&A (CB&I Power)	*****Consortium Profit (CB&I Power)

\* Overhead for CBIS on WEC Contract is \$7.50 / MH over 7,500 MH

\*\* Small Tools in EPC based on 6% Craft Labor Mark Up, PPE is 1% Mark Up

\*\*\* All Home Office MH should be Firm Price Scope, \$3,000,000 excluded from Owner's Options

\*\*\*\* Subcontract Total Cost based on projected manhours indicated (411,000 Craft + 111,400 FNM)

\*\*\*\*Consortium Profit of 4.562 % is based on not exceeding the ETP

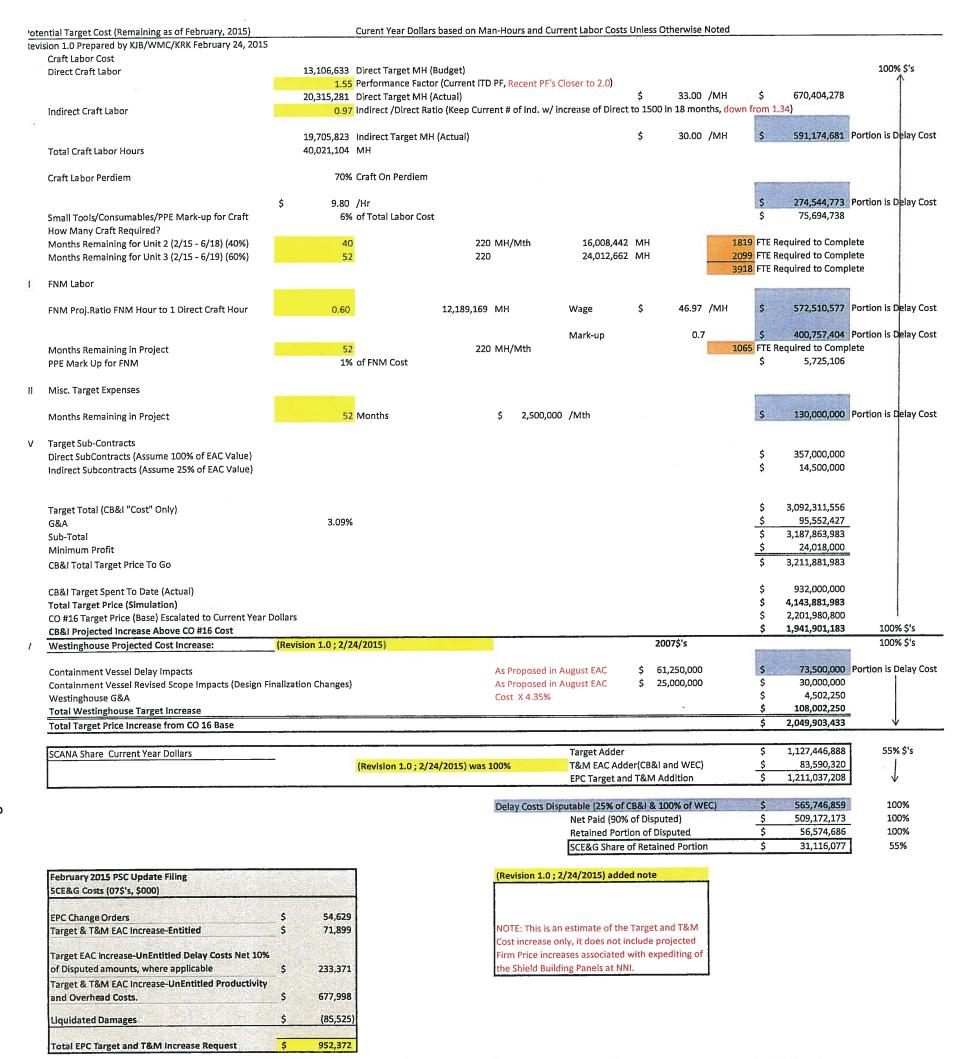
Owner will only be responsible for Owner Directed Changes and Owner Directed Delays

Wage (\$/Hr for Welder @ 50hr/wk)		s	31.43		Ϋ́	31.43
Benefit Markup (Avg. \$)		₩.	22.66		s	22.66
*Overhead \$/MH		₩.	2.50		\$	2.50
**Small Tools & PPE (\$/MH)		₩.	4.50		\$	4.50
Payroll Taxes ( %)			9.85%			9.85%
Subsistence		\$	9:38		<ν-	9.38
Welder \$/MH		\$	73.56		₩	73.56
Craft MH			411,000			411,000
Craft Labor Cost		40-	30,233,019		<b>⇔</b>	30,233,019
FNM \$/MH		ş	94.33		\$	94.33
FNM Hours			111,400			111,400
FNM Cost		₩	10,508,362		₩.	10,508,362
Total Cost		s	40,741,381		\$	40,741,381
CBIS Profit	%8	₩.	3,259,311	10%	\$	4,074,138
Subcontract Target Cost		\$	44,000,692		s	44,815,520
Cap Overage Allowance			112.56%			112.56%
Subcontract Cap		45	49,527,179		45	50,444,349

40,741,381 5,117,118 4,585,850 50,444,349 Estimated Project Costs Contingency Profit Total

0.12560

Negotiation Position



**CONFIDENTIAL INFORMATION - Prepared Subject to Attorney client and work product privileges** 

